

**Quality Criteria Verification  
Executive Summary  
For QCV, Stage Rollout, DMSU and EGI internal**

Name of the component			
Release	EMI.mpi.sl5.x86_64-1.1.0	RT Ticket: <a href="https://rt.egi.eu/guest/Ticket/Display.html?id=2998">https://rt.egi.eu/guest/Ticket/Display.html?id=2998</a>	
Software Provider			
Release Contact	Name: Cristina Aiftimiei	E-Mail: cristina.aiftimiei@pd.infn.it	
Validator	Name: Esteban Freire García	E-Mail: esfreire@cesga.es	
V. Hours Worked	6 hours		
Component st	<b>VERIFIED</b>	Date	
Verification start date	08/11/11	Verification end date	08/11/11

**Summary:**

EMI-MPI was updated from UMD repository without any important issue in a creamCE and Worker Nodes with Torque + Maui installed from UMD repository

There is still two open bugs which was found during the first UMD verification of WN/Torque + EMI-MPI.1.0. It is a torque/maui problem that affects to MPI jobs but is not exclusive of that kind of jobs. As mentioned in the release notes, Maui versions prior to 3.3.4 do not allocate correctly all the nodes for the execution of jobs. See open ggus tickets below. This will be also mentioned in "Comments for SR" section".

**GGUS Tickets:**

- [https://ggus.eu/ws/ticket\\_info.php?ticket=57828](https://ggus.eu/ws/ticket_info.php?ticket=57828)
- [https://ggus.eu/ws/ticket\\_info.php?ticket=67870](https://ggus.eu/ws/ticket_info.php?ticket=67870)

**Summary of Quality Criteria verification:**

	Generic Quality Criteria Total (Critical/Non critical)			
	Passed	Not passed	Not Applicable	Total
<b>TP</b>				
<b>VLD</b>	11			11
	Specific Quality Criteria			
<b>TP</b>				
<b>VLD</b>	4			4

## Quality Criteria verification cheatsheet:

<Insert filled excel cheatsheet>

Criteria	Accepted (Y/N/NA)	Tested (TP/VLD)	Comments
<b>Generic QC</b>			
GENERIC_DOC_1 (Functional Description)	Y	VLD	<a href="http://grid.ifca.es/wiki/Middleware/MpiStart/MpiUtils#Functional_Description">http://grid.ifca.es/wiki/Middleware/MpiStart/MpiUtils#Functional_Description</a>
GENERIC_DOC_2 (Release Notes)	Y	VLD	<a href="http://www.eu-emi.eu/emi-1-kebnekaise-updates/-/asset_publisher/1r6q/content">http://www.eu-emi.eu/emi-1-kebnekaise-updates/-/asset_publisher/1r6q/content</a>
GENERIC_DOC_3 (User Documentation)	Y	VLD	<a href="http://grid.ifca.es/wiki/Middleware/MpiStart/UserDocumentation">http://grid.ifca.es/wiki/Middleware/MpiStart/UserDocumentation</a>
GENERIC_DOC_4 (Online help (man pages))	Y	VLD	<a href="http://grid.ifca.es/wiki/Middleware/MpiStart">http://grid.ifca.es/wiki/Middleware/MpiStart</a>
GENERIC_DOC_6 (Administrator Documentation)	Y	VLD	<a href="http://grid.ifca.es/wiki/Middleware/MpiStart">http://grid.ifca.es/wiki/Middleware/MpiStart</a>
GENERIC_DOC_8 (Software License)	Y	VLD	GPL
GENERIC_DOC_9 (Release changes testing)	Y	VLD	<a href="http://www.eu-emi.eu/emi-1-kebnekaise-updates/-/asset_publisher/1r6q/content">http://www.eu-emi.eu/emi-1-kebnekaise-updates/-/asset_publisher/1r6q/content</a>
GENERIC_DIST_1 (Source Code Availability)	Y	VLD	<a href="http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/SRPMS/tgz/mpi-start-1.1.0.s">http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/SRPMS/tgz/mpi-start-1.1.0.s</a>
GENERIC_DIST_2 (Source Distribution)	Y	VLD	<a href="http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/SRPMS/updates/mpi-start-1">http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/SRPMS/updates/mpi-start-1</a>
GENERIC_DIST_3 (Binary Distribution)	Y	VLD	<a href="http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/x86_64/tgz/mpi-start-1.1.0.ta">http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/x86_64/tgz/mpi-start-1.1.0.ta</a>
GENERIC_MISC_2 (Bug Tracking System)	Y	VLD	<a href="https://ggus.eu/pages/home.php">https://ggus.eu/pages/home.php</a>
<b>Compute Capabilities QC</b>			
PARALLEL_MPI_1 (Precompiled MPI job Execution)	Y	VLD	Job submitted without issues for openmpi
PARALLEL_MPI_2 (MPI job Execution from source.)	Y	VLD	Job submitted without issues for openmpi
PARALLEL_OMP_1 (Precompiled OpenMP job Execution)	Y	VLD	Job submitted without issues for openmpi
PARALLEL_OMP_2 (OpenMP job Execution from source)	Y	VLD	Job submitted without issues for openmpi
<b>Operations Capabilities QC</b>			
MON_PROBE_GENERIC_2 (Service Probe)			

### Validator comments:

emi.mpi was updated on creamCE and on the WNs without problems, the complete list of used repositories from UMD is this:

```
[root@test06 yum.repos.d]# cat EMI.mpi.sl5.x86_64.repo
# EGI Software Repository - REPO META (releaseId,repositoryId,repofileId) -
(2998,383,305)
```

```
[EMI.mpi.sl5.x86_64]
name=EMI.mpi.sl5.x86_64
baseurl=http://admin-repo.egi.eu/sw/unverified/emi.mpi.sl5.x86_64/1/1/0/
enabled=1
protect=1
gpgcheck=1
gpgkey=http://emisoft.web.cern.ch/emisoft/dist/EMI/1/RPM-GPG-KEY-emi
```

UPDATE (OK):

===== Installing the MPI software on CreamCe =====

\* Install the mpi metapackage:

{{{

Nov 08 13:00:58 Updated: mpi-start-1.1.0-1.noarch

}}}

===== Installing the MPI software on the WNs =====

\* Install the mpi metapackage:

{{{

Nov 08 13:00:58 Updated: mpi-start-1.1.0-1.noarch

}}}

CONFIGURATION (OK):

Yaim script was used for CreamCe + MPI configuration and with the Wns + MPI configuration, this is the content for the used site-info.def files:

On creamCe were included the following lines for the MPI configuration:

```
# MPI CONFIGURATION
```

```
#####
```

```
MPI_OPENMPI_ENABLE="yes"
```

```
MPI_OPENMPI_VERSION=1.4
```

On the Wns were include the following lines for the MPI configuration:

```
# MPI CONFIGURATION
```

```
#####
```

```
MPI_OPENMPI_ENABLE="yes"
```

\* Configuring the CE, The MPI\_CE profile should be the first in the yaim configuration, otherwise the Glue variables will not be properly defined. This restriction may be removed in future versions.

{{{.

```
[root@test06 etc]# /opt/glite/yaim/bin/yaim -c -s /opt/glite/yaim/etc/site-info.def -n
MPI_CE -n creamCE -n TORQUE_server -n TORQUE_utils
```

```
[ ..... ]
```

```
Max open servers: 9
```

```
set queue GRID_iberibeu queue_type = Execution
```

```
set queue GRID_iberibeu resources_max.cput = 48:00:00
```

```
set queue GRID_iberibeu resources_max.walltime = 72:00:00
```

```
set queue GRID_iberibeu enabled = True
```

```
set queue GRID_iberibeu started = True
```

```
set queue GRID_iberibeu acl_group_enable = True
```

```
  DEBUG: Mapping: iber.vo.ibergrid.eu --> iberibeu
```

```
  DEBUG: Mapping:
```

```
/VO=iber.vo.ibergrid.eu/GROUP=/iber.vo.ibergrid.eu/ROLE=VO-Admin -->
```

```
iberibeusgm
```

```
  DEBUG: Mapping:
```

```
/VO=iber.vo.ibergrid.eu/GROUP=/iber.vo.ibergrid.eu/ROLE=Production -->
```

```
iberibeuprd
```

```
Shutting down TORQUE Server: [ OK ]
```

```
/var/torque/server_priv/serverdb
```

```
Starting TORQUE Server: [ OK ]
```

```
  DEBUG: zip server log
```

```
  INFO: Executing function: config_mai_cfg_setenv
```

```
  DEBUG: Currently this function doesn't set any environment variables.
```

```
  INFO: Executing function: config_mai_cfg
```

```
  INFO: configuring maui ...
```

```
  DEBUG: Saving the existing maui configuration
```

```
MPI_CE creamCE TORQUE_server TORQUE_utils
```

```
  DEBUG: Starting Maui ...
```

```
Shutting down MAUI Scheduler: [ OK ]
```

```
Starting MAUI Scheduler: [ OK ]
```

```
  INFO: Executing function: config_apel_pbs_setenv
```

```
  DEBUG: This function currently doesn't set any environment variables.
```

```
  INFO: Executing function: config_apel_pbs
```

```
  DEBUG: Check if the parser config template (/etc/glite-apel-pbs/parser-config.xml)
exists, exists if not
```

```
  DEBUG: Create a parser config xml file (/etc/glite-apel-pbs/parser-config-yaim.xml)
```

```
  DEBUG: Creating APEL parser configuration in /etc/glite-apel-pbs/parser-config.xml
```

```
  DEBUG: Change the ownership and permissions of the created config file
```

```
  DEBUG: Add a cron job (edg-apel-pbs-parser) for periodic configuration.
```

```
  INFO: Executing function: config_gip_sched_plugin_pbs_setenv
```

```
  DEBUG: This function currently doesn't set any environment variables.
```

```
  INFO: Executing function: config_gip_sched_plugin_pbs
```

```
  DEBUG: Checks if the batch system is correct for this function
```

```
  DEBUG: Define the 'max jobs' cmd for the VOs
```

```
  DEBUG: Add BATCH_SERVER to the /var/torque/server_name file to enable torque
clients
```

```
  DEBUG: Create ERT configuration
```

DEBUG: Skipping function: config\_torque\_submitter\_ssh\_setenv because it is not defined

INFO: Executing function: config\_torque\_submitter\_ssh

Reloading sshd: [ OK ]

INFO: Configuration Complete. [ OK ]

INFO: YAIM terminated successfully.

}}}

\* Configuring the WNs, The MPI\_CE profile should be the first in the yaim configuration, otherwise the Glue variables will not be properly defined. This restriction may be removed in future versions.

{{{

/opt/glite/yaim/bin/yaim -c -s /opt/glite/yaim/etc/site-info.def -n MPI\_WN -n WN -n TORQUE\_client

[ .... ]

Shutting down TORQUE Mom: [ OK ]

Starting TORQUE Mom: [ OK ]

DEBUG: creating edg-pbs-knownhosts cron job...

DEBUG: creating mom\_logs cron job...

INFO: Executing function: config\_glexec\_wn\_users\_setenv

DEBUG: Currently this function doesn't set any environment variables.

INFO: Executing function: config\_glexec\_wn\_users

INFO: Executing function: config\_glexec\_wn\_log\_setenv

DEBUG: Currently this function doesn't set any environment variables.

INFO: Executing function: config\_glexec\_wn\_log

INFO: Executing function: config\_glexec\_wn\_setenv

DEBUG: Currently this function doesn't set any environment variables.

INFO: Executing function: config\_glexec\_wn

DEBUG: Backing up old configuration file.

DEBUG: Building the user white list

INFO: Generating glexec configuration file /etc/glexec.conf

DEBUG: Specify the log file in the glexec configuration file

INFO: glexec is configured in setuid mode

INFO: Executing function: config\_glexec\_wn\_lcaslcmaps\_setenv

DEBUG: Currently this function doesn't set any environment variables.

INFO: Executing function: config\_glexec\_wn\_lcaslcmaps

INFO: Generating LCAS config file

DEBUG: Backing up LCAS old configuration file.

DEBUG: checking presence of /usr/lib64/modules/lcas\_userban.mod

DEBUG: checking presence of /usr/lib64/modules/lcas\_voms.mod

INFO: Generating LCMAPS config file

DEBUG: Backing up old LCMAPS configuration file.

DEBUG: Setting permissions on the LCMAPS config file

```

DEBUG: ... Include verify proxy module
DEBUG: checking presence of /usr/lib64/modules/lcmaps_verify_proxy.mod
DEBUG: ... Include posix_enf module
DEBUG: checking presence of /usr/lib64/modules/lcmaps_posix_enf.mod
DEBUG: ... Include vomslocalgroup {voms,} {local,pool}account modules
DEBUG: checking presence of /usr/lib64/modules/lcmaps_voms_localgroup.mod
DEBUG: checking presence of /usr/lib64/modules/lcmaps_voms_localaccount.mod
DEBUG: checking presence of /usr/lib64/modules/lcmaps_voms_poolaccount.mod
DEBUG: checking presence of /usr/lib64/modules/lcmaps_localaccount.mod
DEBUG: checking presence of /usr/lib64/modules/lcmaps_poolaccount.mod
DEBUG: Finished LCMAPS configuration
INFO: Executing function: config_vomsmmap_setenv
DEBUG: Setting environment variable GRIDMAPDIR, to value "/etc/grid-
security/gridmapdir".
DEBUG: Unset environment variable GRIDMAPDIR.
INFO: Executing function: config_vomsmmap
INFO: Creating grid-map directory in /etc/grid-security/gridmapdir
INFO: Creating voms grid-map file in /etc/grid-security/voms-grid-mapfile
INFO: Creating voms groupmap file in /etc/grid-security/groupmapfile
DEBUG: **** VO OPS ****
DEBUG: create gridmapdir files
DEBUG: **** VO DTEAM ****
DEBUG: create gridmapdir files
DEBUG: **** VO OPS.VO.IBERGRID.EU ****
DEBUG: create gridmapdir files
DEBUG: **** VO IBER.VO.IBERGRID.EU ****
DEBUG: create gridmapdir files
INFO: Copying the /etc/grid-security/voms-grid-mapfile in the standard location
/etc/grid-security/grid-mapfile
INFO: Configuration Complete. [ OK ]
INFO: YAIM terminated succesfully.
}}

```

ops.vo.ibergrid.eu and iber.vo.ibergrid.eu VOs were included from verification VOMS server installed at LIP. (voms02.ncg.ingrid.pt)

=== TESTING ===

==== Checking ldap (OK) ====

{{{

```
[esfreire@test13 verification]$ ldapsearch -x -h test06.egi.cesga.es -p 2170 -b mds-vo-
name=resource,o=grid | grep MPI
```

GlueHostApplicationSoftwareRunTimeEnvironment: MPI-START

GlueHostApplicationSoftwareRunTimeEnvironment: MPI\_NO\_SHARED\_HOME

GlueHostApplicationSoftwareRunTimeEnvironment: OPENMPI

GlueHostApplicationSoftwareRunTimeEnvironment: OPENMPI-1.4

}}}

{{{

```
[root@test06 yum.repos.d]# ldapsearch -x -H ldap://test06.egi.cesga.es:2170 -b o=grid |  
grep GlueCEStateFreeCPUs
```

GlueCEStateFreeCPUs: 4

GlueCEStateFreeCPUs: 4

GlueCEStateFreeCPUs: 4

GlueCEStateFreeCPUs: 4

}}}

==== Trying some internal commands =====

\* Checking the environment on the WNs

{{{

```
[root@test14 etc]# su - opssgm004
```

```
[opssgm004@test14 ~]$ env|grep MPI_
```

MPI\_OPENMPI\_PATH=/usr/lib64/openmpi/1.4-gcc

MPI\_OPENMPI\_VERSION=1.4

MPI\_DEFAULT\_FLAVOUR=openmpi

I2G\_MPI\_START=/usr/bin/mpi-start

}}}

==== Submitting a job from the CESGA UI =====

{{{

```
[esfreire@test13 ~]$ glite-ce-delegate-proxy -e test06.egi.cesga.es esfreire3
```

```
2011-11-08 13:32:51,655 NOTICE - Proxy with delegation id [esfreire3] succesfully
delegated to endpoint [https://test06.egi.cesga.es:8443//ce-cream/services/gridsite-
delegation]
}}}
```

```
{
{
[esfreire@test13 ~]$ glite-ce-proxy-renew -e test06.egi.cesga.es esfreire3
2011-11-08 13:33:59,707 NOTICE - Proxy with delegation id [esfreire3] succesfully
renewed to endpoint [https://test06.egi.cesga.es:8443//ce-cream/services/gridsite-
delegation]
}}}
```

```
{
{
CPUNumber = 4;
Executable = "/usr/bin/mpi-start";
Arguments = "-v -pre hooks.sh cpi";
InputSandbox = {"cpi.c", "hooks.sh"};
StdOutput = "std.out";
StdError = "std.err";
OutputSandbox = {"std.out", "std.err"};
##OutputSandboxBaseDestUri = "gsiftp://localhost";
OutputSandboxBaseDestUri = "gsiftp://se2.egee.cesga.es/tmp";
Requirements =
  Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
  &&
  Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);
}}}
```

```
{
{
[esfreire@test13 verification]$ cat hooks.sh
#!/bin/sh

pre_run_hook () {

  # Compile the program.
  echo "Compiling ${I2G_MPI_APPLICATION}"

  sleep 20

  # Actually compile the program.
  cmd="mpicc ${MPI_MPICC_OPTS} -o ${I2G_MPI_APPLICATION} $
${I2G_MPI_APPLICATION}.c"
  $cmd
  if [ ! $? -eq 0 ]; then
    echo "Error compiling program. Exiting..."
    return 1
  fi
}
```

```
fi
```

```
# Everything's OK.  
echo "Successfully compiled ${I2G_MPI_APPLICATION}"
```

```
return 0
```

```
}
```

```
}}}
```

```
{
```

```
[esfreire@test13 verification]$ glite-ce-job-submit -r test06.egi.cesga.es:8443/cream-  
pbs-GRID_ops -D esfreire3 job1.jdl  
https://test06.egi.cesga.es:8443/CREAM461852456
```

```
}
```

```
{
```

```
[esfreire@test13 verification]$ glite-ce-job-status  
https://test06.egi.cesga.es:8443/CREAM461852456
```

```
***** JobID=[https://test06.egi.cesga.es:8443/CREAM461852456]  
        Status    = [DONE-OK]  
        ExitCode   = [0]
```

```
}}}
```

```
{
```

```
root@se2 tmp]# cat std.err
```

```
mpi-start [INFO ]:
```

```
*****
```

```
mpi-start [INFO ]: UID    = opssgm002
```

```
mpi-start [INFO ]: HOST    = test14.egi.cesga.es
```

```
mpi-start [INFO ]: DATE    = Tue Nov 8 15:09:16 CET 2011
```

```
mpi-start [INFO ]: VERSION = 1.1.0
```

```
mpi-start [INFO ]:
```

```
*****
```

```
mpi-start [INFO ]: search for scheduler
```

```
mpi-start [INFO ]: activate support for pbs
```

```
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
```

```
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
```

```
mpi-start [INFO ]: activate support for openmpi
```

```
mpi-start [INFO ]: call backend MPI implementation
```

```
mpi-start [INFO ]: start program with mpirun
```

```
Process 0 on test14.egi.cesga.es: n=1
```

```
Using 16384 intervals
```

```
Process 1 on test14.egi.cesga.es: n=1
```

```

[root@se2 tmp]# cat std.out
Compiling cpi
Successfully compiled cpi
=[START]=====
=====
pi is approximately 3.1415926539002363, Error is 0.0000000003104432
wall clock time = 0.001804
=[FINISHED]=====
=====
}}}

```

```

{{{
[esfreire@test13 verification]$ cat job2.jdl
CPUNumber    = 4;
Executable   = "/usr/bin/mpi-start";
Arguments    = "-t openmpi -v -pre hooks.sh cpi";
InputSandbox = {"cpi.c", "hooks.sh"};
StdOutput    = "std.out";
StdError     = "std.err";
OutputSandbox = {"std.out", "std.err"};
OutputSandboxBaseDestUri = "gsiftp://se2.egee.cesga.es/tmp";
Requirements =
  Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
  &&
  Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);
}}}

```

```

{{{
[esfreire@test13 verification]$ glite-ce-job-submit -r test06.egi.cesga.es:8443/cream-
pbs-GRID_ops -D esfreire3 job2.jdl
https://test06.egi.cesga.es:8443/CREAM174373474
}}}

```

```

{{{
[root@se2 tmp]# cat std.err
mpi-start [INFO ]:
*****
mpi-start [INFO ]: UID    = opssgm002
mpi-start [INFO ]: HOST    = test14.egi.cesga.es
mpi-start [INFO ]: DATE    = Tue Nov 8 15:16:31 CET 2011
mpi-start [INFO ]: VERSION = 1.1.0
mpi-start [INFO ]:
*****
mpi-start [INFO ]: search for scheduler
mpi-start [INFO ]: activate support for pbs
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU

```

```

mpi-start [INFO ]: activate support for openmpi
mpi-start [INFO ]: call backend MPI implementation
mpi-start [INFO ]: start program with mpirun
Process 0 on test14.egi.cesga.es: n=1
Using 16384 intervals
Process 1 on test14.egi.cesga.es: n=1
[root@se2 tmp]# cat std.out
Compiling cpi
Successfully compiled cpi
=[START]=====
=====
pi is approximately 3.1415926539002363, Error is 0.0000000003104432
wall clock time = 0.001985
=[FINISHED]=====
=====
}}}

```

```

{{{
[esfreire@test13 verification]$ cat job3.jdl
NodeNumber = 2;
SMPGranularity = 2;
WholeNodes = True;
Executable = "/usr/bin/mpi-start";
Arguments = "-v -pre hooks.sh cpi";
InputSandbox = {"cpi.c", "hooks.sh"};
StdOutput = "std.out";
StdError = "std.err";
OutputSandbox = {"std.out", "std.err"};
OutputSandboxBaseDestUri = "gsiftp://se2.egee.cesga.es/tmp";
Requirements =
  Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
  &&
  Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);
[esfreire@test13 verification]$
}}}

```

```

{{{
[esfreire@test13 verification]$ glite-ce-job-submit -r test06.egi.cesga.es:8443/cream-
pbs-GRID_ops -D esfreire3 job3.jdl
https://test06.egi.cesga.es:8443/CREAM676387789

```

```

}}}
```

```

{{{
[root@se2 tmp]# cat std.err
mpi-start [INFO ]:
*****

```

```

mpi-start [INFO ]: UID    = opssgm002
mpi-start [INFO ]: HOST    = test15.egi.cesga.es
mpi-start [INFO ]: DATE    = Tue Nov 8 15:18:32 CET 2011
mpi-start [INFO ]: VERSION = 1.1.0
mpi-start [INFO ]:
*****
mpi-start [INFO ]: search for scheduler
mpi-start [INFO ]: activate support for pbs
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
mpi-start [INFO ]: activate support for openmpi
mpi-start [INFO ]: call backend MPI implementation
mpi-start [INFO ]: start program with mpirun
Process 0 on test15.egi.cesga.es: n=1
Using 16384 intervals
Process 1 on test15.egi.cesga.es: n=1
[root@se2 tmp]# cat std.out
Compiling cpi
Successfully compiled cpi
=[START]=====
=====
pi is approximately 3.1415926539002363, Error is 0.0000000003104432
wall clock time = 0.002198
=[FINISHED]=====
=====

}}}

{{{
esfreire@test13 verification]$ cat job-oldsyntax.jdl
CPUNumber    = 4;
Executable   = "starter.sh";
Arguments    = "cpi OPENMPI";
InputSandbox = {"starter.sh", "cpi.c", "hooks.sh"};
StdOutput    = "std.out";
StdError     = "std.err";
OutputSandbox = {"std.out", "std.err"};
OutputSandboxBaseDestUri = "gsiftp://se2.egee.cesga.es/tmp";
Environment  = {"I2G_MPI_PRE_RUN_HOOK=hooks.sh"};
Requirements =
    Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
&&
    Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);

}}}

{{{
[esfreire@test13 verification]$ glite-ce-job-submit -r test06.egi.cesga.es:8443/cream-
pbs-GRID_ops -D esfreire3 job-oldsyntax.jdl
https://test06.egi.cesga.es:8443/CREAM988075665

```

```
}}}
```

```
{{{
```

```
[root@se2 tmp]# cat std.err
```

```
mpi-start [INFO ]:
```

```
*****
```

```
mpi-start [INFO ]: UID = opssgm002
```

```
mpi-start [INFO ]: HOST = test14.egi.cesga.es
```

```
mpi-start [INFO ]: DATE = Tue Nov 8 15:23:16 CET 2011
```

```
mpi-start [INFO ]: VERSION = 1.1.0
```

```
mpi-start [INFO ]:
```

```
*****
```

```
mpi-start [INFO ]: search for scheduler
```

```
mpi-start [INFO ]: activate support for pbs
```

```
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
```

```
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
```

```
mpi-start [INFO ]: activate support for openmpi
```

```
mpi-start [INFO ]: call backend MPI implementation
```

```
mpi-start [INFO ]: start program with mpirun
```

```
Process 0 on test14.egi.cesga.es: n=1
```

```
Using 16384 intervals
```

```
Process 1 on test14.egi.cesga.es: n=1
```

```
[root@se2 tmp]# cat std.out
```

```
Compiling cpi
```

```
Successfully compiled cpi
```

```
=[START]=====
```

```
=====
```

```
pi is approximately 3.1415926539002363, Error is 0.0000000003104432
```

```
wall clock time = 0.001967
```

```
=[FINISHED]=====
```

```
=====
```

```
}}}
```

**Not applicable Quality Criteria**

**Specific Functional Tests to be repeated in SR:**

Test number	Description	Motivation

**Specific Non-functional tests (Scalability, etc...) to be repeated in SR:**

Test number	Description	Motivation

**Comments for UMD QC definition (TSA2.2):**

- Review criteria xxxx
- Add criteria xxxx

**Comments for SR (TSA1.3):**

It has been seen that CREAM/torque + MAUI is not able to execute parallel jobs when it requested more than one processor. There is still two open bugs which was found during the first UMD verification of WN/Torque + EMI-MPI.1.0. It is a torque/maui problem that affects to MPI jobs but is not exclusive of that kind of jobs. As mentioned in the release notes, Maui versions prior to 3.3.4 do not allocate correctly all the nodes for the execution of jobs. More information can be found in the open ggus tickets:

**GGUS Tickets:**

- [https://ggus.eu/ws/ticket\\_info.php?ticket=57828](https://ggus.eu/ws/ticket_info.php?ticket=57828)
- [https://ggus.eu/ws/ticket\\_info.php?ticket=67870](https://ggus.eu/ws/ticket_info.php?ticket=67870)

**Comments for DMSU (TSA2.5):**

**Comments for TP:**